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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,006	12/19/2000	Nobuyuki Kita	019519-280	2793

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Platon N. Mandros
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
P.O. Box 1404
Alexandria, VA 22313-1404

EXAMINER

GILLIAM, BARBARA LEE

ART UNIT PAPER NUMBER

1752

DATE MAILED: 10/04/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/739,006

Applicant(s)

KITA, NOBUYUKI

Examiner

Barbara Gilliam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on IDS filed July 16, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-6 are pending.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on December 22, 1999. It is noted, however, that applicant has not filed a certified copy of the 11-364312 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Brinckman.

- a. In US Patent No. 1,215,924, Brinckman et al teach an information-recording method wherein a recording material is used comprising a heat-sensitive recording layer of a composition such that the solubility of any given area of the layer in a given solvent can be increased by heating that area of the layer (page 1, lines 47-68). In Example 15, a subbed polyethylene terephthalate film was coated with a solution of novolak resin in ethanol. A covering layer comprising gelatin, water and ethanol was

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coated thereon. The first layer comprising novolak resin meet the present limitations for the ink-receptive layer wherein the novolak resin meets the present limitations for the oleophilic organic high molecular compound. The covering layer meets the present limitations for the water-receptive layer. Independent claim 1 is a product-by-process claim. Applicant is reminded of MPEP 2113: "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." However, in the present application the prior art teaches the process limitation as well. Ethanol is used to coat both layers.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

6. Claims 1 and 5-6 are rejected under 35 U.S.C. 102(e) as being anticipated by DeBoer et al.

a. In US Patent No. 6,110,645, DeBoer et al teach a method of making a lithographic printing plate comprising exposing a support, an ink receptive photothermal conversion layer and an ink repellant layer to a laser beam having an intensity great than $0.1 \text{ mW}/\mu^2$ wherein the ink repellant layer contains a crosslinked polymeric matrix containing a colloid of an oxide or a hydroxide of a metal selected from the group consisting of beryllium, magnesium, aluminum, silicon, gadolinium, germanium, arsenic, indium, tin, antimony, tellurium, lead, bismuth, a transition metal, and combinations thereof. The crosslinked polymeric matrix is derived from a crosslinking agent which is alkoxy silane, an alkyl titanate, an alkyl zirconate or an alkyl aluminate (claim 1). The ink repellant layer can be hydrophilic (claim 6) and the thickness of the layer can range from 0.05 to 1 micron (claims 8-9). Preferably aminopropyltriethoxysilane is used as the crosslinking agent (column 5, lines 11-16). The hydrophilic ink repellant layer meets the present limitations for the water-receptive layer. The ink receptive layer comprises a film forming binder such as polycarbonates, polyacrylates, polyesters, nitrocellulose, cellulose acetate propionate and cellulose acetate (column 4, lines 40-48). The ink receptive layer meets the present limitations for the ink-receptive layer wherein the binder meets the present limitations for the oleophilic organic high molecular compound.

b. Independent claim 1 is a product-by-process claim. Applicant is reminded of MPEP 2113: "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art,

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the claim is unpatentable even though the prior product was made by a different process.” However, in the present application the prior art teaches the process limitation as well. The ink receptive layer of Example 3 corresponds to the ink receptive layer of Example 1 wherein methyl ethyl ketone and methylisobutyl ketone were used to coat the carbon black, nitrocellulose and zirconium oxide containing layer. In Example 3, the hydrophilic ink repellant layer comprising 1.6 weight % aminopropyltriethoxysilane was coated using water and ethanol. Ethanol is capable of dissolving the nitrocellulose of the ink receptive layer as required in the present application.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeBoer et al in view of Vermeersch et al.

a. As indicated in the corresponding 102(e) rejection above, DeBoer et al (US Patent No. 6,110,645) teach a method of making a lithographic printing plate comprising exposing a support, an ink receptive photothermal conversion layer and an ink repellant layer to a laser beam having an intensity great than $0.1 \text{ mW}/\mu^2$ wherein the ink repellant layer contains a crosslinked polymeric matrix containing a colloid of an

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oxide or a hydroxide of a metal. The crosslinked polymeric matrix is derived from a crosslinking agent which is alkoxy silane, an alkyl titanate, an alkyl zirconate or an alkyl aluminate (claim 1). The patent fails to specify the crosslinking polymer of the ink repellent layer (column 5, lines 11-16). It would have been obvious to use conventional hydrophilic crosslinking resins including the hydrophilic binders of Vermeersch et al.

b. In US Patent No. 6,210,857, Vermeersch et al teach a heat-sensitive imaging element for providing a lithographic printing plate, comprising a lithographic base with a hydrophobic oleophilic surface and a top layer comprising a compound capable of converting light into heat and a hydrophilic polymer, characterized in that the hydrophilic polymer is crosslinked (abstract). A particularly suitable crosslinked hydrophilic layer may be obtained from a hydrophilic binder crosslinked with a crosslinking agent such as tetra-alkylorthosilicate. As the hydrophilic binder homopolymers and copolymers of hydroxyethyl acrylate or hydroxyethyl methacrylate can be used (column 4, lines 50-65). In Examples 1-6, the hydrophilic binder is used in an amount of 9.1 weight %. The crosslinked hydrophilic layer preferably contains substances that increase the mechanical strength and the porosity of the layer. For this purpose colloidal silica can be used (column 5, lines 4-13).

c. Therefore it would have been *prima facie* obvious to one of ordinary skill in the art to make and image a printing plate comprising a support, an ink receptive photothermal conversion layer and an ink repellent layer with a laser beam wherein the ink repellent layer contains a crosslinked polymeric matrix containing a hydrophilic binder, a crosslinking agent and a colloid of an oxide or a hydroxide of a metal with reasonable expectation of obtaining a printing plate with high image quality (DeBoer et

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al; column 3, lines 20-24) and mechanical strength (Vermeersch et al; column5, lines 4-13).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. In US Patent Application No. 2002/0068239, Van Damme et al teach a processless lithographic printing plate.

b. In US Patent Application No. 2001/0033992, Kita teaches a heat-sensitive lithographic printing plate precursor.

c. In US Patent Application No. 2001/0024766, Kita et al teach a heat-sensitive lithographic printing plate precursor.

d. In US Patent No. 6,399,476, Van Damme et al teach a processless printing plate with cover layer containing compounds with cationic groups.

e. In US Patent No. 6,312,866, Obuchowicz et al teach the formation of images.

f. In US Patent No. 6,165,685, Maerz et al teach thermally recordable material insensitive to white light.

g. In US Patent No. 6,136,508, DeBoer et al teach lithographic printing plates with a sol-gel layer.

h. In US Patent No. 6,090,524, Deboer et al teach lithographic printing plates comprising a photothermal conversion material.

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i. In US Patent No. 6,068,965, Hauquier et al teach heat-sensitive imaging material and method for making on-press lithographic printing plates requiring no separate processing.

j. In US Patent No. 5,985,515, Van Rompuy et al teach heat sensitive imaging element and a method for producing lithographic plates therewith.

k. In US Patent No. 5,962,188, DeBoer et al teach direct write lithographic printing plates.

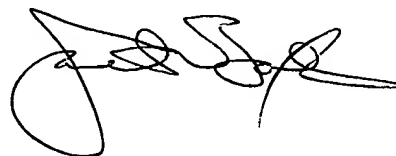
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara Gilliam whose telephone number is 703-305-1330. The examiner can normally be reached on Monday through Thursday.

a. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on 703-308-2303. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

b. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



BG
September 30, 2002



JANET BAXTER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700